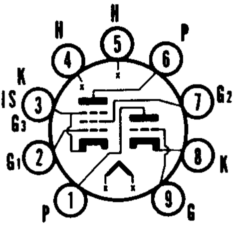


SYLVANIA TYPE 6CM8 5CM8

HIGH-MU TRIODE SHARP CUTOFF PENTODE



9FZ

MECHANICAL DATA

Bulb	T-6½
Base	E9-1, Small Button 9-Pin
Outline	6-2
Basing	9FZ
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

	5CM8	6CM8
Heater Voltage	4.7	6.3 Volts
Heater Current	600	450 Ma
Heater Warm-up Time[1]	11	11 Seconds
Heater-Cathode Voltage (Design Center Values)		
Heater Negative with Respect to Cathode		
Total D C and Peak		200 Volts Max.
Heater Positive with Respect to Cathode		
D C		100 Volts Max.
Total D C and Peak		200 Volts Max.

DIRECT INTERELECTRODE CAPACITANCES (Approx.)

Triode Section	
Grid to Plate	1.9 μμf
Input: g to (h + k)	1.6 μμf
Output: p to (h + k)	0.22 μμf
Pentode Section	
Grid No. 1 to Plate	.04 μμf Max.
Input: g1 to (h+k+g2+g3+I.S.)	6.0 μμf
Output: p to (h+k+g2+g3+I.S.)	2.6 μμf
Coupling	
Pentode Plate to Triode Grid	0.01 μμf Max.
Pentode Grid No. 1 to Triode Plate	0.15 μμf Max.
Pentode Plate to Triode Plate	0.10 μμf Max.

MAXIMUM RATINGS (Design Center Values)

	Triode Section	Pentode Section
Plate Voltage	300	300 Volts
Grid No. 2 Supply Voltage		300 Volts
Grid No. 2 Voltage	See 6AM8 Rating Chart	
Positive Grid No. 1 Voltage	0	0 Volts
Plate Dissipation	1.0	2.0 Watts
Grid No. 2 Dissipation		0.5 Watt
Grid No. 1 Circuit Resistance		
Self Bias		1.0 Megohm
Fixed Bias		0.25 Megohm

CHARACTERISTICS

Class A₁ Amplifier

	Triode Section	Pentode Section
Plate Supply Voltage	250	200 Volts
Grid No. 2 Voltage		150 Volts
Grid No. 1 Voltage	−2	0 Volts
Cathode Bias Resistor		180 Ohms
Plate Current	1.8	9.5 Ma
Grid No. 2 Current		2.8 Ma
Amplification Factor	100	
Plate Resistance (approx.)	50,000	600,000 Ohms
Transconductance	2000	6200 μmhos
Grid No. 1 Voltage for Ib = 10 μa (approx.)		−8 Volts

NOTE:

1. Heater warm-up time is defined as the time required for the voltage across the heater to reach 80% of its rated value after applying four (4) times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to three (3) times rated heater voltage divided by rated heater current.

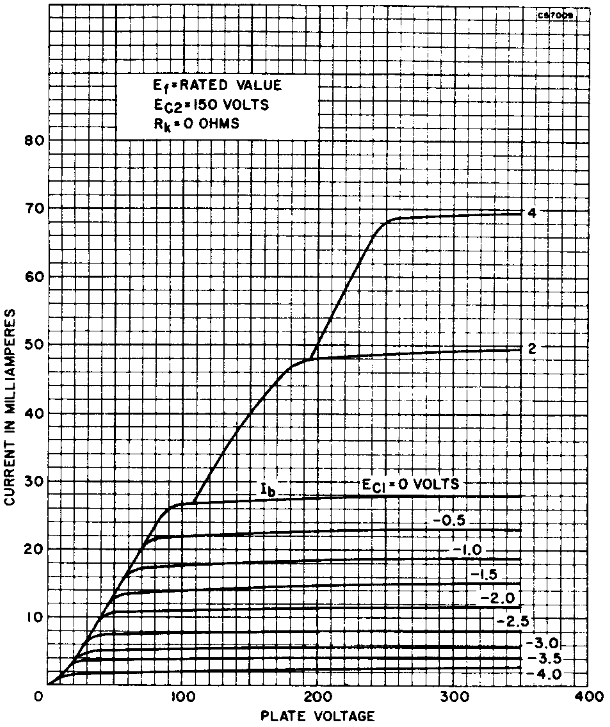
APPLICATION

The Sylvania Type 6CM8 is a high mu triode and sharp cutoff pentode. The pentode section may be used as an I F amplifier, video amplifier, AGC amplifier and reactance tube.

The 5CM8 is identical to the 6CM8 except for heater characteristics. Both types employ controlled heater warm-up time for services in series heater string television receivers.

6CM8, 5CM8 (Cont'd)

AVERAGE PLATE CHARACTERISTICS
(PENTODE SECTION)



AVERAGE PLATE CHARACTERISTICS
(TRIODE SECTION)

